DYNAMIC SPECIAL CHARACTER SELECTION FOR USE IN BYTE ALIGNMENT CIRCUITRY

Abstract of the Disclosure

[0071] Circuitry for locating the boundaries of bytes in a data stream is provided. The data stream typically has comma or header information that provides an indication of the byte boundaries. When circuitry detects this information, it can align the byte boundaries and thereby provide byte-aligned data to utilization circuitry (e.g., a programmable logic device). In accordance with this invention, circuitry can select different special characters for use in detecting the byte boundaries, where the special characters are different lengths. Circuitry aligns the byte boundaries based on the selected special character when enabled by a control signal. Once aligned, circuitry can provide a signal indicating which special character was used to align the boundaries. Another advantage of the invention is that it eliminates alignment problems associated with system latency. Circuitry automatically locks alignment to a first instance of a detected special character independent of an external control signal.